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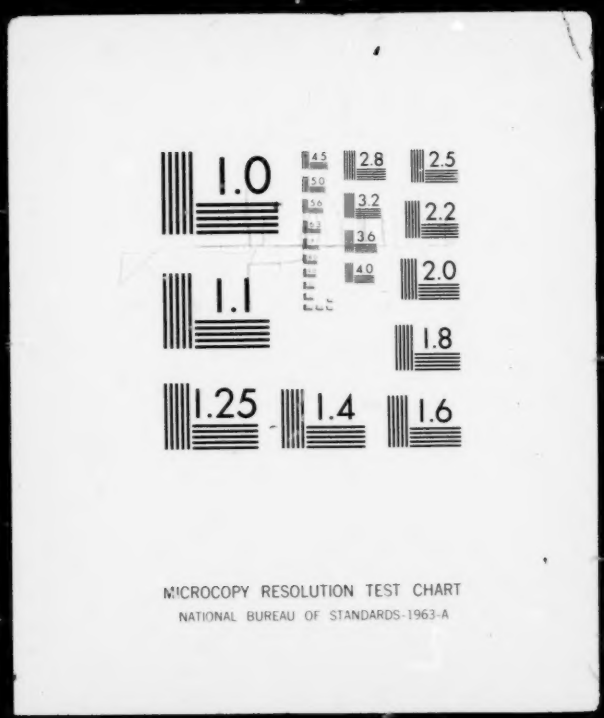

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ABSTRACT

The Institute of Library Research is a statewide organized research unit of the University of California whose activities have been directed toward the objectives of education, research, and public service. During the period from July 1972 to July 1973, the Institute underwent structural reorganization in which all of its operations were consolidated into the operation of the Berkeley branch and in which the University-Wide Library Automation Program (ULAP) was expanded and established as a separate Center within ILR. The research projects and services undertaken by the ILR staff are affiliated with and supportive of the academic program of the UC Berkeley School of Librarianship and the UCLA School of Library Service. In addition to research and development in computer applications and automated procedures for solving library problems, ILR projects involve investigations of library service needs, problems of social needs and library access, production of library tools, development of data bases, and systems analysis. (Author/SL)

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Institute of Library Research

University of California

Annual Report

July 1972 to June 1973

Charles P. Bourne, Director

Robert L. Carmichael, Branch Manager

Edited by:

John Thelin and Bonnie F. Shaw

Institute of Library Research
University of California
South Hall Annex
Berkeley, California 94720

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I. INTRODUCTION

The Institute of Library Research is a statewide organized research unit of the University of California and is affiliated with the School of Librarianship at UC Berkeley and with the School of Library Service at UCLA. Since its establishment in 1963, ILR has been engaged in studies of operational problems within the UC library system and has performed research and development services in library and information science.

The Institute of Library Research supports the University's academic program by providing research facilities for students and faculty, by serving as host organization for visiting scholars, and by bringing guest speakers and instructors to the University. ILR provides students with professionally relevant part-time and summer employment. The Institute of Library Research is one of the largest and most active research facilities in its field in the United States. Publication of papers and reports of interest to scholars and practitioners in the field of library science is one of the Institute's important functions.

ILR staff members have strong backgrounds in such fields as mathematics, electrical engineering, physics, computer science, and linguistics, as well as graduate backgrounds in librarianship and information science. In addition to research and development in computer applications and automated procedures for solving library problems, ILR projects involve investigation of library service needs, problems of social needs and library access, production of library tools, development of data bases, and systems analysis. Through these and related activities, ILR has pursued objectives consistent with the broad goals of the University of California: education, research, and public service.

II. ADMINISTRATION

Since October 1971 ILR has been under the direction of Mr. Charles P. Bourne, who also holds the position of Professor-in-Residence with the School of Librarianship at the University of California, Berkeley. Professor Bourne has directly supervised the Berkeley branch of ILR, while Mr. Robert Carmichael managed the Los Angeles branch. During the current fiscal year, the activities of the UCLA branch were consolidated into the Berkeley branch so that as of July 1, 1973, all ILR activities will be directed from the Berkeley branch.

During this period considerable attention was given to the question of how the University-wide Library Automation Program (ULAP) should be organizationally configured within the University so as to maximize over-all benefit to the University. Consideration was given to such factors as ways to support the academic program and to take advantage of existing resources and facilities, while at the same time to permit ULAP to be more directly responsive to the University Libraries. An organizational plan and structure was developed and implemented at the end of the fiscal year in which ULAP was established as a separate Center within the Institute, which shared the Institute's facilities, but in which the ULAP Director reported directly to the University's Vice President for Academic Affairs. As part of this restructuring of the ULAP effort, the ULAP office at UC Santa Barbara was also consolidated into the Berkeley operation at the end of this fiscal year.

In addition to his other duties, Professor Bourne was appointed Acting Director of ULAP in February 1972. Recruitment of a full-time Director of ULAP continued through 1972, and at the close of this fiscal year, Mr. Jay Cunningham of ILR was officially named to that position.

Mr. Cunningham has an extensive background in library and information science, data processing, and library automation. He has been a member of the ILR staff as a research specialist and project manager since 1967. Mr. Cunningham holds an M.L.S. degree from UC Berkeley.

III. GENERAL ILR PROJECTS

A. PROJECTS COMPLETED

1. Preliminary Investigation of Present and Potential Library and Information Service Needs

Principal Investigator:	Charles P. Bourne School of Librarianship University of California, Berkeley
Funding Agency:	U.S. National Commission on Libraries and Information Science Washington, D.C.
Duration:	June 1972 to February 1973

The primary objectives of this project were to identify population groups with information needs that differ from the needs of the general population, to define these needs, and to formulate tentative specifications for post-1975 library services. Background work involved searching and reviewing the literature concerned with user studies and specifications for future library services.

This study concentrated on the special needs of identifiable subgroups in the population. The following groups received particular attention: children and young adults, older people, non-professionals, professionals with job-related information needs, students, foreign-language speaking (or reading) people, American Indians, Blacks, rural people, Mexican-Americans, women, migrant workers, economically and socially disadvantaged, functionally (or totally) illiterate, blind and partially sighted, deaf, mentally retarded, physically handicapped and shut-ins, and prisoners.

2. Uniform Slavic Transliteration Alphabet (USTA)

Principal Investigator:	Charles P. Bourne School of Librarianship University of California, Berkeley
Project Manager:	Borut Dekleva Institute of Library Research University of California, Berkeley
Funding Agency:	ILR and School of Librarianship, UCB
Duration:	Fiscal Year 1972

This project was undertaken as preliminary research for the

design of a uniform system of machine language representation for the Slavic bibliographic records which were not included in the University of California Union Catalog Supplement-1 (UCUCS-1).

The development of the Uniform Slavic Transliteration Alphabet (USTA) consisted of four phases:

1. Testing of fifty selected Slavic records representing four Slavic languages: two with Cyrillic characters, and two with Latin characters with diacritic marks.

2. A University-wide survey of Slavic holdings and transliteration and cataloging practices.

3. The design and application of USTA, and a comparison of USTA to the existing national and international transliteration practices in libraries and documentation centers.

4. Preparation of a final project report.

3. Semantic Foundations for Question-Answering Systems (SEMQAS II, III)

Principal Investigator:	Professor Harold Borko (Phase I, II) John Olney (Phase II, III) School of Library Service University of California, Los Angeles
Project Manager:	John Olney
Contracting Agency:	National Library of Medicine (USPHS) Bethesda, Maryland
Duration:	May 1, 1970 to April 30, 1971 (Phase I) May 1, 1971 to April 30, 1972 (Phase II) May 1, 1972 to April 30, 1973 (Phase III) (Grant period May 1, 1972 to April 30, 1974)

The purpose of this project was to computationally derive linguistic data to be used for foundational work on the semantics of languages suitable for question-answering systems and for fact retrieval. This included obtaining from machine-readable transcripts of Webster's Seventh Collegiate Dictionary and its pocket abridgement, data which can be used to improve natural-language processors, especially as applied to medical information problems.

Recent work (Phase I and II) focused on affixation with the objective of completing a precise disambiguation of dictionary defining formulas which correlate with particular affixes. One goal of this

work is to enable affix-stripping routines to predict the meaning effects of non-technical affixes so as to provide appropriate semantic interpretations for the words formed by them in at least some cases. Discussion of Phase IV is found in the section on "On-Going Projects."

B. CONTINUING PROJECTS

1. Development of a Center for Information Services Phase III (CIS Phase III): Prototype Operation and Operational System Completion

Principal Investigators:	William B. Kehl (Phase IIB, III) Director, Campus Computing Network University of California, Los Angeles
	Professor Robert M. Hayes (Phase IIA) School of Library Service University of California, Los Angeles
Co-Principal Investigators:	Robert Vosper (Phase IIA, IIB, III) University Librarian University of California, Los Angeles
	Professor Harold Borko (Phase IIB) School of Library Service University of California, Los Angeles
	Robert L. Carmichael (Phase IIB) Institute of Library Research University of California, Los Angeles
Project Managers:	Bruce Briggs Campus Computing Network University of California, Los Angeles
	Peter G. Watson University Library University of California, Los Angeles
Contracting Agency:	National Science Foundation Office of Science Information Services Washington, D.C.
Duration: Phase IIA	July 1, 1969 to December 31, 1970 (Continued to June 30, 1971)
Phase IIB	January 1, 1971 to June 30, 1972 (Continued to December 31, 1972)
Phase III	July 1, 1972 to June 30, 1973 (Continued to December 31, 1973)
Phase IV	July 1, 1973 to June 30, 1974

Phase IIA of this grant initiated development of a Center for Information Services on the UCLA campus. The Center provides a capability to acquire and process magnetic tape data bases of various kinds for the University library.

Phase IIB and III were awarded to the Campus Computing Network, as task emphasis changed to detailed program specifications and design, prototype development, and the offering of experimental data base services. In Phase IV, formal project responsibility will be transferred to the UCLA University Library.

During Phase II, the major task of completing the first operational version of CIS software (IPS, Information Processing System) was accomplished. A transition was made from a small-scale, experimental user service to a settled, operational service which performs thousands of searches per month from five major data bases. Library personnel increasingly assumed project tasks and responsibilities, and the UC Library Council recognized CIS as the primary statewide university resource for the provision of mechanized information services to all campuses. The Institute remained concerned with coordination, documentation, reporting, testing and evaluation, and user-related problems. A description of the Institute's supporting activities are included in the following project summary.

2. Supporting Studies and Technical Assistance to the CIS Project

Principal Investigator:	Charles P. Bourne School of Librarianship University of California, Berkeley
Project Manager:	Jo Robinson Institute of Library Research University of California, Berkeley
Contracting Agency:	National Science Foundation Through UCLA Campus Computing Network
Starting Date:	October 1972

During Phase III, ILR's support to the CIS project was centered primarily in two areas: expansion of services to the northern campuses, and project evaluation.

The expansion activities initially concentrated on Berkeley and had two objectives: 1) to develop a pilot group of SDI (Selective Dis-

semination of Information) users from among regular library patrons and 2) to acquaint campus librarians with CIS services, and to integrate profile-writing activities into the regular services of campus libraries. To these ends, close liason was developed and maintained with campus librarians from disciplines served by CIS data bases. This liason, coupled with top management support for UC librarian involvement in SDI work, resulted in excellent attendance by UC Berkeley and UC San Francisco librarians at the CIS seminar on profile writing for the Information Processing System (IPS) language held in June 1973.

Evaluation efforts centered about the interface between SDI and document delivery systems: two studies related to the on-campus availability of cited material, while another study suggested the incorporation of location codes and local call numbers into SDI printouts in order to facilitate document delivery services for the users. ILR evaluative activities are continued on a reduced scale during CIS Phase IV.

3. Library Information Problems of Prison Populations

Principal Investigator:	Charles P. Bourne School of Librarianship University of California, Berkeley
Project Manager:	Marjorie LeDonne Institute of Library Research University of California, Berkeley
Contracting Agency:	Department of Health, Education, and Welfare: U.S. Office of Education, Bureau of Libraries and Educational Technology Washington, D.C.
Duration:	April 1, 1972 to September 30, 1973

The objective of this study is to examine the information problems and resources of prison populations. On-site visits were made to more than 50 adult and juvenile correctional institutions under Federal and state administration in the states of Florida, Georgia, West Virginia, Connecticut, New York, Illinois, Montana, Washington, and California. Taped interviews with departmental and institutional administrators, educators, librarians, state library consultants, and inmates dealt with a wide range of library problems, including the need for improved legal information services, the inadequacy of present staff library services, lack of advancement opportunities for institutional librarians, limited range of materials, censorship, and control of library materials. Discussions focused on issues of structural reorganization and the relative merits of various strategies for developing improved correctional libraries.

Part of the information gathered in the project's bibliographic search provided the material for an article, "Summary of Court Decisions

Relating to the Provision of Library Services in a Correctional Institution," published in the July 1973 issue of the A.H.I.L. Quarterly.

A Final project report is expected to be available in January 1974.

4. Survey of the ERIC Tape Searching Services in Selected U.S. Facilities

Principal Investigator:	Charles P. Bourne School of Librarianship University of California, Berkeley
Project Manager:	Allan J. Humphrey Institute of Library Research University of California, Berkeley
Contracting Agency:	U.S. National Institute of Education Subcontracted through Stanford University
Duration:	September 1, 1972 to December 31, 1973

For several years the U.S. National Institute of Education's Education Resources Information Center (ERIC) has offered a magnetic tape information service containing citations and abstracts of reports and journal articles in the field of education. At present, approximately 100 organizations receive ERIC tapes on a regular basis. A survey was made of all of the organizations that are known to use the ERIC tapes extensively. Site visits were made to 22 facilities throughout the country, in which information was gathered concerning services provided, volume of activity, operations, facilities, clientele, staff, and costs. Other information centers were surveyed by telephone. The survey was completed in May 1973. The final report is now in preparation.

5. Semantic Foundations for Question-Answering Systems, Phase IV (SEMQAS IV)

Principal Investigator:	John Olney School of Library Service University of California, Los Angeles
Project Manager:	John Olney
Contracting Agency:	National Library of Medicine (USPHS) Bethesda, Maryland
Duration:	May 1, 1973 to June 30, 1974.

SEMQAS Phase IV and the ILR staff members assigned to this project were transferred to the UCLA Center for Computer-Based Behavioral Studies, effective May 1, 1973.

C. PROPOSED PROJECTS

1. Investigation of On-Line Searching of the ERIC Data Base

Principal Investigator:	Charles P. Bourne School of Librarianship University of California, Berkeley
Project Manager:	Allan J. Humphrey Institute of Library Research University of California, Berkeley
Contracting Agency:	U.S. National Institute of Education Subcontracted through Lockheed Missiles and Space Company
Duration:	July 9, 1973 to March 31, 1974

The Lockheed Missile and Space Company has contracted with the U.S. National Institute of Education to provide a facility for on-line computer searching of the ERIC (Educational Resources Information Center) data base. At present, approximately a dozen organizations throughout the United States search the ERIC file on-line via the Lockheed facility. Over a period of time it has been observed that there are wide discrepancies among the various organizations in the number of searches that are processed per "terminal-connect hour." The basic task of this investigation will be to determine why these discrepancies exist. Seven or eight organizations will be surveyed to learn in detail of their operating policies and procedures. Also, Lockheed will provide detailed, step-by-step logs of terminal activity that will be analyzed thoroughly to clarify this problem. All hypotheses regarding the variations in throughput will be tested by carrying out the corresponding terminal operations at ILR.

Lockheed will install a cathode ray tube terminal with low-speed line printer at ILR for the purposes of this investigation. This equipment also will be used in demonstrating on-line searching to students in the UC School of Librarianship.

2. Telemedicine: Procedures and Information Mechanisms

Principal Investigator:	K. Samuelson, M.D. Institute for Information Processing Royal Institute of Technology Stockholm, Sweden
Co-Principal Investigators:	John Hanley, M.D. Brain Research Institute University of California, Los Angeles

Co-Principal Investigators (con.):

Harold Borko
School of Library Service
University of California, Los Angeles

Robert L. Carmichael
Institute of Library Research
University of California, Los Angeles

Project Manager: Robert L. Carmichael

Submitted to: National Institute of Health
Bethesda, Maryland

Proposed Duration: July 1, 1973 to December 31, 1976

The aim of this project is to improve medical support, preventive medicine, and health care delivery by means of teleprocessing, multimedia communications, and automated knowledge backup for clinical decisions. An outline of methodology would be provided for medical information transfer in remote, as well as congested, areas.

The work will have four specific goals: 1) to provide a review of existing literature in the area of telemedicine, 2) review and identify needs, 3) identify priorities for future work in this area, and 4) recommend action to improve methodologies and services.

3. Machine Language Representation of Modern European Languages

Principal Investigator: Charles P. Bourne
School of Librarianship
University of California, Berkeley

Co-Principal Investigator: Allan Humphrey
Institute of Library Research
University of California, Berkeley

Project Manager: Borut Dekleva
Institute of Library Research
University of California

The objective of this project is to develop a system of machine language representation that will enable the handling of bibliographic records written in modern European languages for library automation programs. The considerable amount of transliteration study work done in the development of the Uniform Slavic Transliteration Alphabet (USTA) will be incorporated into this project. This system will be compatible with the MARC II format.

4. Ranking Criteria for Information Retrieval System Output

Principal Investigator:	William S. Cooper School of Librarianship and Institute of Library Research University of California, Berkeley
Submitted to:	National Science Foundation Washington, D.C.
Duration:	July 1, 1973 to September 1, 1974

The purpose of this project is to provide a counterexample to the natural and widespread supposition that the best way to rank the documents in the output of a reference retrieval system is by the probability of their usefulness (relevance, satisfaction, etc.) to the user. Surprisingly enough, such a ranking is not always optimal. This project will describe a specific counterexample which shows the probability-ranking principle to be invalid, and will discuss the implications of the counterexample.

IV. UNIVERSITY-WIDE LIBRARY AUTOMATION PROGRAM (ULAP)

Director: Charles Bourne (Acting, until June 30, 1973)
Jay Cunningham (July 1, 1973 -)

These projects were organized during 1972-1973 as permanent, ongoing activities funded by the University. They reflect an assigned mission of an operational and a developmental character and thus, are not "contracted" in the sense of research projects supported by extramural funds with definite termination dates. The California State Colleges conversion service, discussed in section A 3, is the one exception.

A. BIBLIOGRAPHIC CENTER (BIBCENTER)

Project Manager: Jay Cunningham

The BibCenter began as a pilot project in April 1972 with the express purpose of exploiting standard catalog data on magnetic tape available from the Library of Congress Machine Readable Cataloging (MARC) Subscription Service, for creation of products for the UC libraries. The first goal of the project was the printing of catalog cards by computer from LC tapes. In 1972-1973 BibCenter was given a stable budget basis from University funds and is now a firmly-supported production facility comprising staff, equipment, and bibliographic data bases. The staff completed groundwork to expand the Center's scope to cover a variety of automated products. BibCenter is expected to acquire more extensive "network" functions as time and funding permit.

In 1972-1973 a number of high priority service missions were defined for the Center. Some of these were nearing full operational status at the end of June 1973. These services are as follows: Bibliographic Search and Copy Service, Catalog Card Printing Service, Catalog Record Conversion Service, Bibliographic and Authority Control Services, Data Base Distribution Service, and Programming Services.

1. Bibliographic Search and Copy Service

In 1972-1973 a complete file of MARC subscription records from 1968 through December 1972 was obtained by copying the comprehensive file which has been maintained at UCLA since the inception of the LC MARC Subscription project. This file was placed on computer disc and an LC card number index was built to make it accessible for searching. Catalog search requests received from four pilot UC libraries were processed experimentally during the year to confirm the operational readiness of the search sub-system. By April 1973 the system was ready for active search operations, and a weekly run was scheduled and operated by the computer center.

2. Catalog Card Printing Service

Development and testing of a flexible card printing computer program was conducted in the University's Administrative Data Processing Center using a large general-purpose machine. This basic tool was ready for regular operation at the end of the year, although production procedures were not yet fully prescribed. Numerous conferences were held during the year with five UC campuses to identify precise products desired, document local specifications (e.g., catalog card formats), and provide liasion and planning with the library administrations and catalog departments to assist them in participating in the pilot project.

3. Catalog Record Conversion Service

Principal Investigator:	Charles P. Bourne School of Librarianship University of California, Berkeley
Project Manager:	Jay Cunningham Manager, BibCenter
Contracting Agency:	California State University and Colleges (Library Systems Project)
Duration:	June 29, 1972 to March 30, 1974

In June 1972 the "Bibliographic Data Base Conversion for the California State University and Colleges" project was funded to build a large catalog data from two sources: 1) the LC MARC tapes would be searched using the Bibliographic Search and Copy Service for records already in machine form. 2) For other records, the system developed for use in the UC Union Catalog Supplement-1 would be brought back into production to accomplish the needed file-building.

By year's end, a pilot phase was completed to assemble 2,400 records into machine readable form. The results were accepted by the State Colleges headquarters and plans were being laid for expanding the project into full production.

The Catalog Record Conversion Service was originally intended to be implemented with funding provided for conversion of records for UC Union Catalog Supplement-2. Because of delays in the planning for UCUCS-2, it was decided to initiate this service using the State Colleges file instead, with the intent of exploiting the records for mutual benefit of both systems of libraries.

4. Bibliographic and Authority Control Services

a. Library of Congress Cumulated Subject Headings

This project reached fruition in September 1972 with publication of Library of Congress Subject Headings Supplements, 1966-1971 Cumulation. A 793-page volume comprising six separate annual supplements to a vital cataloging tool, this book was printed in quantity for sale to libraries outside the UC system. By year's end a total of 1200 copies had been delivered to several hundred libraries, bringing to the University a total revenue of $38,790. University Librarian Melvin Voigt of UC San Diego generously made it possible for the chief designer of the project, Roy Torkington of the UCSD Library Systems Office, to complete the work successfully, as a contribution to the ULAP and the library community.

b. Guide Cards for Library Catalogs

An off-shoot of the UCUCS-1 and LC Subject Headings project, this project was proposed in early 1972 for production of raised guide cards for the UC libraries, printed by computer techniques. Work was delayed, however, by the lack of available technical manpower. The project was held in abeyance pending assignment of a programmer team either at BibCenter headquarters or at one of the UC libraries, probably in 1973-1974.

5. Data Base Distribution Service

This was still in the planning stages during 1972-1973. The objective is to devise a mechanism for copying and distributing the various bibliographic data bases available to the BibCenter, for sale or other dissemination. In one case the data base being copied for use by others resides on 37 reels of magnetic tape, implying complicated procedures to ensure accuracy and completeness.

6. Programming Services

The package of some 50 computer programs developed in the UC Union Catalog Supplement-1 project was being prepared for distribution by license arrangement during 1972-1973. The package was duplicated and delivered to one revenue customer during the year. Work continued on program documentation. A comprehensive set of program abstracts was drafted in the early part of the year and was under intensive editing and revision for expected publication in the Fall of 1973.

Various catalog data handling modules of the ILR-developed program package (called the Bibliographic Control System, or BIBCON) have been installed at UC libraries or associated campus computer centers, as well as such outside agencies as the Alameda County Library. The BibCenter programming staff continued to provide a moderate amount of "on-demand" consultative and software maintenance support to users of many of the basic programs.

B. UC UNION LIST OF SERIALS (UCULS)

Project Manager: Fred Bellomy (Until June 30, 1973)
Manager, ULAP Office
University of California, Santa Barbara

The UC Serials List Project was initiated in 1970 as an effort to assemble a union file of the active title serial holdings of the entire UC system of nine campuses and the Livermore Laboratory facility. Serials files were obtained from each campus, and approximately 155,000 holdings entries were drawn upon to build a computer file. This file is the first attempt to represent the complete serials holdings of the University in one merged tool.

In 1972 the project was split into two locations: the major editing was reassigned to ILR-Berkeley in April 1972; the systems design and programming component remained at the ULAP office at UC Santa Barbara. The UCSB tasks were scheduled to be moved to Berkeley July 1, 1973, as a result of the gradual phase-out of the Santa Barbara operation.

A complete review of the union serials file, printed for editing purposes, was accomplished in 1972-1973. A major advance was made with ULAP funding support, by the UC Berkeley Library, where a total of 48,600 non-document serials records were converted by the end of the year. This data base will be merged into UCULS later, after editing and publication as a separate product to be issued by the Library.

At year's end the design work on the project awaited the appointment of new ULAP management and ULS project management, as well as the recruitment of a full-time professional librarian as Editor. The major objective of the project is to print a list of the University's serials holdings in a form as accurate and complete as possibly by April 1974.

C. UNIVERSITY OF CALIFORNIA UNION CATALOG (UCUC)

Project Manager: First Supplement Project — Allan Humphrey
Institute of Library Research
University of California, Berkeley

Duration: 1968 to 1973 (First Supplement Project)
1972 - (Second Supplement Project

This Union Catalog Supplement is a book-form catalog of all monographs processed by the cataloging departments of the nine campuses of the University of California during the period 1963 to 1967. The catalog supplements the book-form Author-Title Catalog of the University of California, Berkeley and Dictionary Catalog of UCLA, published in 1963. The project was brought to its final stage by the Institute's staff in May 1972. Since then, the data base, processed for publication by photocomposition, has been in the hands of a commercial vendor for manufacture

of a book-form catalog. The expected delivery date for the printed catalog is October 1973.

The UCUCS Project has resulted in many noteworthy accomplishments, including perhaps the largest catalog record conversion effort performed to date by any library, and the largest computer-produced library catalog ever prepared. A bibliographic file of more than 750,000 unique catalog records in MARC-structure has been created on magnetic tape, as has a subject heading authority file and various other auxilury files. An extensive body of software has been developed and tested for file conversion, file improvement, automatic editing, consolidation of duplicates, and formulation of catalog entries for photocomposition.

Planning for a second supplement, tentatively to encompass the records cataloged during 1968-1972, was initiated in January 1972. Work is now underway to reappraise the objectives of the Union Catalog, to revise the conversion production methods, and to realign the output products so as to take account of such new technological developments as the advent of microform publication media as a substitute for the hard copy form.

D. MARKETING OF LIBRARY AUTOMATION PRODUCTS

Project Manager: Allan Humphrey, Institute of Library Research

Two major printed (book-form) library cataloging support or bibliographic tools have been prepared in final form by various computer-based ILR projects over the past three years. Further, four different important magnetic tape data bases have been prepared for sale or use by license arrangement. A number of other tools or files are in preparation. All these products will be available to outside organizations via purchase/license agreements, or by various exchange arrangements. Marketing efforts to the end of 1972-1973 resulted in sales revenues of about $165,000 for the UC Union Catalog project alone. A list of the presently available products is found in the section, "Publications and Products."

E. COORDINATION OF INTER-CAMPUS ACTIVITIES

The ULAP Director has an added role of coordination of library automation activities which cross campus boundaries or which are supported via ULAP funds controlled by the Director, even though the work may be performed at a campus. During 1972-1973 two particular functions continued to receive attention in this area:

1. Circulation Control Systems

As a result of new State funding received by UC in January 1973 in the Governor's budget, and in accompaniment with increased interest in common systems and data bases between UC and the State Colleges segment libraries, several tasks were initiated. Beyond the high level

discussion between the statewide offices of the two systems, in which the ILR Director particpated, there was active interest in the library circulation transactor procurement starting in 1972 by the CSUC headquarters as part of a network system to be developed for the 19 State College libraries.

Standards for equipment and machine files were analyzed and discussed. Plans were under review at the two largest UC campuses in order to respond to the new budgetary support expected in 1973-1974. The relation of the work at campus level to a wider, inter-campus perspective was an important topic in the ULAP budget preparation which was in progress through early 1973. (See "Inter-Segmental Cooperation.")

2. Book Fund Accounting (BOFAC)

The BOFAC pilot project was originated as an on-line network function at UC Irvine and was extended for library book accounts in UCLA, UCSB, and UC Riverside. Evaluation of the BOFAC pilot project by the three campuses using the system continued in 1973. At the end of the year, one of the libraries was forced to drop out of the network due to budgetary limitations. A fourth campus was actively negotiating for connection to the Irvine system as a replacement for 1973-1974.

F. LONG RANGE PLANNING

Two planning foci emerged during the year: 1) a need for multi-year budgetary program estimates for library automation and for automated system planning to integrate local campus plans with a unifying perspective covering a range of UC resources. The University-wide factors include computing equipment, funding sources, such applications as union catalogs and their proper functions in a time of budgetary retrenchment in higher education, and the appropriate allocation of roles and missions between the central ULAP group and the local campus library systems offices. 2) A need for support of continuing short duration analytic studies, some based on automated products, was identified. For example, there is a need to estimate the overlap of holdings in the University Libraries' collections of monographs and serials, and to study circulation traffic and volume, inter-library loan, acquisitions, and book-use statistics. Much of the needed information can be derived from various UC magnetic tape data bases.

The Institute of Library Research and ULAP staff began to translate some of these needs into specific proposals, two of which were submitted to the UC President's Office late in the year. These proposals requested support of joint Institute-School of Librarianship efforts in the areas of library ordering of high cost items and UC holdings duplications as evidenced in the libraries' card catalogs.

V. ILR PUBLIC SERVICE

A. GENERAL

1. Alameda County Library

The Institute of Library Research has assisted the Alameda County Library in producing that library's first comprehensive, retrospective book catalog of juvenile holdings. Prior to establishment of these programs, the county library had only a catalog which covered juvenile acquisitions between 1964 and 1970. ILR contributed software (PREAFR, AFR, FIX, INVENTRY, PRINTSUS) and person hours in the installation of these programs. ILR is cooperating in plans to use the same programs for the county library's adult holdings.

2. Library and Information Problems of Prison Populations

The public service activities of the Library and Information Problems of Prison Populations project included cooperation with the American Correctional Association in the development and publication of Guidelines for the Provision of Legal Reference Materials for Offenders-A Tool for Correctional Administrators. Copies were made available to all state departments of correction, state libraries, and major correctional institutions in the country, under a grant from the Office of Education of the Department of Health, Education, and Welfare.

This ILR project also made a successful contribution toward having standards for library services included in the revision of California's Minimum Jail Standards, now being written by the California State Board of Corrections.

B. Intersegmental Cooperation

During the past year the Institute of Library Research has devoted considerable effort to development of programs which promote cooperation between the University of California library and the libraries of the California State University and Colleges (CSUC). These activities, known as "Intersegmental Cooperation," aim to introduce ways in which the libraries of both these segments of the California System of Higher Education can work together to provide more effective service to the students, faculty, and staff of both systems.

ILR staff participated in a UC-CSUC joint task force which reviewed the status of existing programs and proposed new mechanisms for library coordination. Existing coordination, including inter-campus loans, computer program exchanges, and computer workshops were discussed and reviewed in these meetings.

ILR's Library Automation program, BibCenter, and Union List of Serials will be directly related to increased intersegmental cooperation. ILR also worked in conjunction with CSUC on a pilot project to convert CSUC catalog records into MARC compatible machine-readable form. ILR studies have included analyses of circulation system costs, book usage at UC and CSUC, and inter-library loan traffic.

ILR has undertaken investigation of possible sources of system-wide circulation compatibility and transferability. This has included a proposal for a standard UC-CSUC library patron card which would meet the requirements of libraries in both systems. The CIS Selective Dissemination of Information project (SDI) has provided a data base searching service for student and faculty patrons at several campuses.

VI. SUPPORT TO THE ACADEMIC PROGRAM

One important charter objective of ILR is to provide support to the University's academic program. ILR's support, particularly to the UC Berkeley School of Librarianship, has been most noticeable in the following areas:

A. PROFESSIONALLY-RELEVANT PART-TIME AND SUMMER EMPLOYMENT FOR STUDENTS

ILR has provided part-time and summer employment as Laboratory and Research Assistants for a large number of students, both from the Library School and from other departments. Since January 1972, 64 graduate students (including 42 from the Library School) have been employed at Berkeley by ILR (see the roster in Part VII.). A total of more than $50,000 in salaries were paid to these students during the period January 1, 1972 and July 1, 1973. Not only did this employment provide direct financial assistance to these students, but also provided work experience directly related to their professional interests.

B. SOURCE OF STUDY PROBLEMS FOR STUDENTS

ILR is accessible to all students (whether employed by the Institute or not) as a source of real case study problems for class projects, individual study efforts, or doctoral dissertations. ILR staff members are available and are encouraged to work with these students in order to provide the necessary problem statements, information, materials, and resource support.

One example of ILR support to classes is the effort made with Professor Victor Rosenberg's recent L. 208 class on "Library User's Studies." In this instance, some of the assigned class project work was tied closely to an on-going ILR study of national information needs and the identification of various user groups. Because some of this class' project work and survey findings were of potential use to the ILR project, ILR assistance was given in the preparation in the preparation and duplication of questionnaires used for the class surveys.

Examples of some of the study projects in progress or recently completed by Berkeley students from ILR-furnished problem statements are summarized in the following discussion. Student names are in parentheses.

1. Dissertation Topics

Inter-library Telefascimile transmission (D.L.S. awarded in School of Librarianship) (Ralph Shoffner).

File searching strategies (dissertation topic for Ph.D. in Electrical Engineering) (Arjun Aiyer).

1. Dissertation Topics (continued)

Problems of uniform transliteration and representation of Slavic languages in machine language form (under consideration as part of dissertation topic for Ph.D. in the School of Librarianship) (Borut Dekleva).

2. Individual Study (L. 299)

Analysis of types and frequency of changes made to LC catalog cards by CSUC libraries (Wolfgang Tatsch).

Program planning for statistical analysis of LC MARC tapes (Donald Egan).

Survey of national library network in Yugoslavia (Borut Dekleva).

3. Design Seminar

Development of a diagnostic core collection of catalog records representing all major cataloging problems, for use in testing book catalog production programs (Michael Berger).

Analysis of adequacy of UC campus library support to the present computer-based SDI system (Assad Busool).

Identification of pre-acquisition predictors of book use (Kenneth Weeks).

Correlation of frequency of use of low-use or no-use books at UCB with the same titles at CSUC campuses (Donald Thompson).

4. Systems Analysis Course

Currency and consistency of use of LC subject headings in the UCB library.

Analysis of filing problems and extent of mis-filing in UCUCS book catalog.

Analysis of entry consolidation problems and extent of failure to consolidate entries in UCUCS book catalog.

Determination of measures of error, and error rate for UCUCS book catalog.

Determination of response time for book requests from UCB Library Loan Department.

5. Projects Worked on By Research Assistants or Laboratory Assistants

Survey of literature relating to library service to prison populations.

Analysis of adequacy of UC campus library support to the present computer-based SDI system (Judy Todd, Christian Aguolu).

Analysis of overlap of San Francisco Public Library current acquisitions with LC MARC data bases.

Analysis of overlap of UC Radiation Laboratory monograph collection with catalog records in LC MARC, UCUCS, and UC Santa Cruz machine data bases.

Frequency of incidence and filing rules considerations in use of initial articles in all major languages in UCUCS data base (Borut Dekleva).

Survey of Library automation efforts (Jo Robinson).

Survey of library user studies and specifications for post-1975 library service (Gilda Perolman, Judy Todd).

Editorial support to the production of the UC Union List of Serials.

Support to the analysis and pre-processing of catalog records for UCUCS-2.

C. ON-LINE LABORATORY AND OTHER COMPUTER SUPPORT

ILR has been making a continuous effort to revive and update the Library School's on-line laboratory so that demonstrations can be provided for faculty members and their classes, upon request. This laboratory facility was severely disrupted when the IBM 360/40 was removed from the Campus Computer Center in July 1972. However, after some persistent efforts, the laboratory facility has begun to be re-instituted by using the IBM 360/65 at University Hall. The new system has worked successfully in an initial test, and arrangements are presently being made to schedule for daily operational use by the ILR technical staff. It is hoped that future access may also be provided to any interested Library School faculty member for his classes. ILR is continuing to investigate ways to provide other on-line terminal access to some of the national data base query services.

ILR has also assisted in providing computer support for such classes as Professor Michael Cooper's L. 275, "Data Processing for Libraries." The ILR support has included, for example, the administrative and procedural arrangements associated with submitting jobs to the University Hall computer facilities, as well as providing daily courier runs to and from the computer facilities to test and run the students' programs. Similar assistance was also provided for L. 276, "Survey of Library Automation."

D. EXTRA-MURAL SUPPORT

ILR provides assistance to Library School faculty members in their formulation and preparation of proposals for extra-mural support. This support includes such areas as editorial assistance for proposal writing-determining the proper format and required numbers of copies for particular funding agencies, preparation of accompanying budget estimates, typing and reproduction work, and clearance with various University offices. Assistance is also given in the determination of the appropriate funding source for a particular proposal and the transmission of the proposal to the funding agency. ILR is often involved also in initial discussions with the funding agency, to help clarify or determine more acceptable work statements, schedules, and levels of support for the proposed work. In addition to several proposals submitted by the ILR Director, assistance in proposal activities were also given recently to Professor William Cooper (for NSF) and Professor Victor Rosenberg (for NLM). Preliminary proposal discussions are also underway with Professor Raynard Swank (for the Yugoslav government).

E. INSTRUCTORS AND GUEST SPEAKERS FOR LIBRARY SCHOOL COURSES

In addition to the courses taught by the ILR Director, ILR staff members, over a period of several years now, have served as Lecturers for classes in the Library School and other Departments. This includes Debbie Barret (Bibliography I), Ruth Dunham (Bibliography I.), Allan Humphrey (L. 275 for six different quarters, 298 study in Summer 1970, 299 study in Spring 1973), and Nancy Slanger (Bibliography I.). Furthermore, ILR has been a source of guest speakers for various classes and Library School colloquia.

F. SDI SERVICES TO FACULTY AND STUDENTS

ILR's present participation in the NSF-funded Center for Information Services project at UCLA calls for ILR to develop and expand computer-based Selective Dissemination of Information (SDI) services to the northern UC campuses. A recent Library School graduate, Jo Robinson, was hired as a regular ILR staff member to work on that project. As part of that activity, ILR has worked with the faculty and doctoral students at the Library School to provide computer-based SDI services or retrospective searches, tailored to each individual, to assist in their personal research work. Each Library School faculty member has been contacted and invited to participate in these free services. A similar invitation has been extended to most of the Library School doctoral students. These same SDI services are provided to the students of L. 276, "Survey of Library Automation," as a class exercise, with each student formulating and coding his own profile for a data base of his choice, and making subsequent adjustments as he receives his printouts during the quarter.

G. HOST ORGANIZATION FOR VISITING SCHOLARS

ILR has acted as a host organization for visiting scholars, providing some office space, supporting services and consultations during their stay in Berkeley. These visitors have provided a useful exchange of information with some of the Library School faculty members.

H. OTHER SUPPORT

ILR has contributed a number of books and other publications to the Library School Library, and continues to work with this library to help maintain a strong collection in several main areas of mutual interest to the School. Card decks have been prepared for Library School class problems on filing rules. ILR also prepared several technical exhibits for the display cases in the Library School Library.

VII. PERSONNEL

A. SPECIAL STAFF NOTES

Robert L. Carmichael, Manager of the Institute of Library Research at Los Angeles since 1970, closed down the Institute's UCLA branch at the end of June 1973. Under Mr. Carmichael's management, the Los Angeles branch was a busy and vital enterprise which supported major grants and contracts on the UCLA campus, supported a number of grants managed primarily on other campuses, and prepared and submitted several major proposals. Mr. Carmichael has since returned to the UCLA Graduate School of Education to complete his doctoral dissertation.

Fred Bellomy, formerly Program Manager of the UC Library System Development program, resigned from the Program staff effective June 30, 1973. Mr. Bellomy plans to return to head the Library Systems Office at UC Santa Barbara during 1973-1974, where he previously served from 1966 to 1970. His tenure as Program Manager was marked by several years of dedicated effort in the development of cooperative automated systems for the UC Libraries. In particular, the cost and effectiveness analytic study which was undertaken during his tenure represents one of the largest and most penetrating appraisals ever done of a multi-campus University library organization.

The Institute of Library Research owes these men a great debt of gratitude for their distinguished service. We wish them well in their new positions.

B. STAFF MEMBERS

The following persons were ILR staff members during part or all of this reporting period, except for the noted category of consultants under contract to support specific ILR projects.

Los Angeles

Manager

Robert Carmichael

Researchers (UCLA Professors)

Harold Borko

Research Assistants

Judge Schonfeld
Ray Weeks

Principal Programmer

John Olney

Administrative Assistant

Laura Gillen

Los Angeles (con.)

Senior Coder

Hugh Kottler
Don Ramsey

Clerk-Typist

Carol Armstrong

Key Punch Operator

Sylvia Tidwell

Consultants

Jeffrey Gruber
Paul Ziff

Berkeley

Director

Charles P. Bourne

Specialists

Jay Cunningham
Allan Humphrey

Associate Specialist

Thomas Hargrove

Assistant Specialists

Marjorie LeDonne
Linda Nakamura
Nancy Slanger

Junior Specialists

Borut Dekleva
Jo Robinson
Joan Stout

Programmers

Arjun Aiyer
Margaret Ely
Bill Harrelson
Maxine Sansing

Coder

Lawrence Legard

Researchers (UCB Professors)

Victor Rosenberg

Administrative Assistants

Barbara Johnson
Bonnie Shaw

Editorial Assistants

Carole Fender
Linda Herold
John Thelin

Principal Clerks

Sheryl Haynes
Rhozalyn Perkins

Senior Typist Clerks

Lorraine Blok
Judy Kolbas
Rachel Meserve
Judy Schrut

Berkeley (con.)

Research Assistants

G. Michael Berger
Elizabeth Guillaumin
Don Hoffmeister
R. Charles Martell
Gilda Perolman
Rod Randall
Pepi Ross
Wolfgang Tatsch
Judy Todd

Consultants

Pauline Atherton
Marcia Bates
Cecilia J. Surace

Laboratory Assistants: M.L.S. Students

Christian Aguolu
Arthur Anderson
Lora Boyd
Robert Brandriff
Maryly Burks
Assad Busool
Peter Cziffra
Carolyn Daniel
Robert Girard
Constance Gloy
Judy Hansburg
Charlene Herrick
David Hull
Jean Hull
Ishrat Kadri
William Kaupe
Ann Kennedy
Marliese Kim
Gerald Korshak
Susan Mace
Jean McMunn
Leon Megrian
Karen Olson
Marion Peters
Eanestine Petty
Ken Renworth
Carolyn Salzgeber
Nanette Sand
Dianne Shirley
Roberta Steiner
Gloria Stockton
Donald Thompson
Patricia Thompson
Mary Wilson
Ralph Wilson
Judy Woodward

Other UC Students

Steven Arnaudo
Thomas Roger Clark
Edward F. Dong
Karen Elam
Richard Hashimoto
Arlyne Kajita
Gerald Korshak
Jeffrey Lewis
Bruce Papp
Masaru Sakamoto
Alan Silverman
Doris Willingham
Joan Winer
Henry Yu

Santa Barbara

Program Manager

Fred Bellomy

Senior Programmer

Nancy Smith

Senior Typist Clerks

Joan Lemmon
Olivia Sanchez

EDP Systems Analyst

Jim Corey

Librarian

Eleanor Veazey

VIII. PUBLICATIONS AND PRODUCTS

A. PUBLICATIONS

Bourne, Charles P. et. al., Preliminary Investigation of Present and Potential Library and Information Service Needs (Berkeley: Institute of Library Research, University of California, February 1973) Prepared for the U.S. National Commission on Libraries and Information Science, 87 pp. (ED 073 786)

Bourne, Charles P., and Jo Robinson, SDI Citation Checking as a Measure of the Performance of Library Document Delivery Systems (Berkeley: Institute of Library Research, University of California, 1973) 10 pp. (ILR-73-002)

Kehl, W.B., R. Vosper, H. Borko, and R.L. Carmichael, Final Report, Phase IIB, January 1, 1971 to June 30, 1972. The Development of a Center for Information Services. Detailed Design and Prototype Development (Los Angeles: Campus Computing Network, University Library, Institute of Library Research, University of California, 1973). (ED 068 130).

LeDonne, Marjorie, "Summary of Court Decisions Relating to the Provision of Library Services in Correctional Institutions," AHIL Quarterly (Winter/Spring 1973). (ILR-73-005)

Todd, Judy, Summary Report of Student Studies of the Subject Headings Used in the University of California, Berkeley Subject Catalog (Berkeley: Institute of Library Research, University of California, 1973) 8 pp. (ILR-73-001)

Weeks, Kenneth, Determination of Pre-Acquisition Predictors of Book Use: Final Report (Berkeley: Institute of Library Research, University of California, 1973) 20 pp. (ILR-73-003).

Weeks, Kenneth, Proposal for a University of California/ California State University and Colleges Inter-Segmental Machine Readable Library Patron Card (Berkeley: Institute of Library Research, University of California, 1973) 21 pp. (ILR-73-004).

B. ULAP PRODUCTS

1. Publications — Price

Library of Congress Subject Headings Supplements, 1966-1971 Cumulation (Produced by Supplement Cumulation Task Team of the University of California Library Automation Program, September 1972) 793 pp. $ 40.00

1. Publications (con.)

	Price
University of California Union Catalog of Monographs Cataloged by the Nine Campuses from 1963 through 1967; A Supplement to the Catalogs of the University Libraries at Berkeley and Los Angeles published in 1963 (Berkeley: Institute of Library Research, 1972) 47 volumes.	$ 6,000.00

2. Computer Programs

UC Bibliographic Control System (BIBCON) Software Package.	$ 8,000.00
UC/LC Subject Headings Supplement Cumulation Software Package.	$ 500.00

3. Machine Data Bases

LC Subject Headings Data Base (7th Ed.), either or both: a) in UC-MARC structure Authority Format b) in indexed Sequential Format (ISAM) (contains such additional headings as Geographics)	$ 800.00
1966-1971 Cumulation of LC Subject Headings Supplements Data Base	$ 500.00
UC Union Catalog Supplement Master Bibliographic Data Base (MARC-structure records)	(to be announced)